

Cumulative Indexes

Contributing Authors, Volumes 73-77

A

Aebi M, 73:1019-49
Aebi U, 73:749-89
Aitken CE, 77:177-203
Alber F, 77:443-77
Alessi DR, 75:137-63
Altuvia S, 74:199-217
Autexier C, 75:493-513

B

Baker D, 77:363-82
Balci H, 77:51-76
Bambara RA, 73:589-615
Barnes G, 76:563-91
Bartlett SE, 73:953-90
Bassel-Duby R, 75:19-37
Batey RT, 73:539-57
Baumeister W, 74:833-65
Baxter S, 73:1051-87
Bayascas JR, 75:137-63
Beachy PA, 73:891-923
Beavo J, 76:481-511
Beltrao P, 77:415-41
Benkovic SJ, 75:519-41
Berg P, 77:14-44
Bestor TH, 74:481-514
Bhattacharyya RP,
75:655-80
Bialik S, 75:189-210
Bishop RE, 76:295-329
Blacklow SC, 74:535-62
Blander G, 73:417-35
Block SM, 77:149-76

Boehning D, 73:437-65
Boeke JD, 75:435-65
Bolen DW, 77:339-62
Bono F, 76:647-71
Borgia A, 77:101-25
Brandolin G, 75:713-41
Brandt U, 75:69-92
Bredt DS, 74:219-45
Buranachai C, 77:51-76
Bustamante C, 73:705-48;
77:45-50, 205-28

C

Cane DE, 76:195-221
Caporaso JG, 74:179-98
Cavicchioli R, 75:403-33
Chamaillard M, 74:355-83
Chang Y-F, 76:51-74
Chapman ER, 77:615-41
Chemla YR, 73:705-48;
77:205-28
Chen AY, 76:195-221
Chen J, 73:241-68
Chien P, 73:617-56
Chiti F, 75:333-66
Chun J, 73:321-54
Ciccia A, 77:259-87
Clarke J, 77:101-25
Coller J, 73:861-90
Collier RJ, 76:243-65
Conti E, 76:647-71
Conti M, 76:481-511
Cook A, 76:647-71

Cookson MR, 74:29-52
Cramer WA, 75:769-90
Cravatt BF, 74:411-32;
77:383-414
Crown SE, 74:385-410

D

Dahout-Gonzalez C, 75:713-41
Dakoji S, 74:219-45
Darie CC, 74:83-114
Das R, 77:363-82
Davidson AL, 73:241-68
Davies GJ, 77:521-55
Dean DR, 74:247-81
de Crécy-Lagard V, 73:147-76
de Lange T, 73:177-208
DePace AH, 73:617-56
Dillin A, 77:727-54
Dillingham MS, 76:23-50
Di Noia JM, 76:1-22
Dobson CM, 75:333-66
Dorywalska M, 77:177-203
Doucette PA, 74:563-93
Doudna JA, 73:539-57
Dowell P, 74:515-34
Driessen AJM, 77:643-667
Drubin DG, 76:563-91

E

Eck MJ, 76:593-627
Eggert US, 75:543-66
Eliot AC, 73:383-415

Ellenberger T, 77:313-38
 Elofsson A, 76:125-40
 Engel A, 77:127-48
 Engelman DM, 75:707-12
 Eric DA, 74:681-710
 Eswaran J, 73:467-89

F

Falkenberg M, 76:679-99
 Ferguson-Miller S, 75:165-87
 Fersht AR, 77:557-82
 Field CM, 75:543-66
 Forde NR, 73:705-48
 Förster F, 74:833-65; 77:443-77
 Fukushima N, 73:321-54
 Funke L, 74:219-45

G

Gangloff M, 76:141-65
 Gaub HE, 77:127-48
 Gay NJ, 76:141-65
 Gelb MH, 77:495-520
 Gerstein M, 73:1051-87
 Ghosh SK, 75:211-41
 Gillespie B, 73:837-59
 Goldstein LSB, 75:607-27
 Goll MG, 74:481-514
 Goode BL, 76:593-627
 Greenbaum D, 73:1051-87
 Greenleaf WJ, 77:149-76
 Gridley NDF, 75:567-605
 Grunstein M, 76:75-100
 Guarente L, 73:417-35
 Gustafsson CM, 76:679-99

H

Ha T, 77:51-76
 Haber JE, 75:111-35
 Haering CH, 74:595-648
 Hajra S, 75:211-41
 Hakemian AS, 76:223-41
 Haltiwanger RS, 73:491-537
 Hammes-Schiffer S,
 75:519-41
 Handel TM, 74:385-410
 Harbury PB, 76:331-49
 He A, 74:433-80
 Helenius A, 73:1019-49

Hendrickson TL, 73:147-76
 Henrissat B, 77:521-55
 Herbert KM, 77:149-76
 Herrmann H, 73:749-89
 Herrmann JM, 76:723-49
 Hoogenraad CC, 76:823-47
 Hoogenraad NJ, 76:701-22
 Hoppins S, 76:751-80
 Hosler JP, 75:165-87
 Hu Z, 74:515-34
 Hughes C, 73:467-89
 Hwang PM, 73:107-46

I

Imam JS, 76:51-74
 Imlay JA, 77:755-76
 Inesi G, 73:269-92
 Inohara N, 74:355-83
 Ishii I, 73:321-54
 Ishitsuka Y, 77:51-76
 Izhaky D, 73:705-48

J

Jansen R, 73:1051-87
 Jayaram M, 75:211-41
 Jeme J, 76:513-38
 Jensen GJ, 77:583-613
 Jeon H, 74:535-62
 Jiang X, 73:87-106
 Jinek M, 76:647-71
 Joerger AC, 77:557-82
 Johnson A, 74:283-315
 Johnson DC, 74:247-81
 Johnson ES, 73:355-82
 Johnson MK, 74:247-81
 Johnson RE, 74:317-53
 Johnson Z, 74:385-410
 Joo C, 77:51-76
 Jovine L, 74:83-114
 Joyce GF, 73:791-836

K

Kaelin WG Jr, 74:115-28
 Kaguni LS, 73:293-320
 Kao H-I, 73:589-615
 Kapp LD, 73:657-704
 Kaufman RJ, 74:739-89
 Kay LE, 73:107-46

Khosla C, 76:195-221
 Kiel C, 77:415-41
 Kilberg MS, 75:629-54
 Kim Y-J, 76:447-80
 Kimchi A, 75:189-210
 Kimple RJ, 73:925-51
 Kirsch JF, 73:383-415
 Klein H, 77:229-57
 Knight R, 74:179-98
 Komeili A, 76:351-66
 Korkin D, 77:443-77
 Koronakis V, 73:467-89
 Kozarich JW, 77:383-414
 Kunkel TA, 74:681-710
 Kurisu G, 75:769-90

L

Lackner L, 76:751-80
 Lairson LL, 77:521-55
 Lambeau G, 77:495-520
 Lane MD, 74:515-34
 Larsson N-G, 76:679-99
 Lau EK, 74:385-410
 Lauquin GJM, 75:713-41
 Lawrence AG, 74:433-80
 Lee MS, 76:447-80
 Lehman IR, 75:1-17
 Lehnart SE, 76:367-85
 Levitzki A, 75:93-109
 Li PTX, 77:77-100
 Lill R, 77:669-700
 Lim WA, 75:655-80
 Linder ME, 73:559-87
 Lindsey-Boltz LA, 73:39-85
 Linn S, 73:39-85
 Litscher ES, 74:83-114
 Liu P, 74:433-80
 Liu Y, 73:589-615
 Lorsch JR, 73:657-704
 Löwe J, 75:467-92
 Lowe JB, 73:491-537
 Lučić V, 74:833-65
 Lue NF, 75:493-513
 Lutkenhaus J, 76:539-62

M

Mair W, 77:727-54
 Mann RK, 73:891-923
 Marks AR, 76:367-85

Marshall RA, 77:177-203
 McDonald C, 74:355-83
 McDonald N, 77:259-87
 McEachern MJ, 75:111-35
 McKinney MK, 74:411-32
 Michie KA, 75:467-92
 Mills DA, 75:165-87
 Mishani E, 75:93-109
 Mitchison TJ, 75:543-66
 Moffitt JR, 77:205-28
 Montell C, 76:387-417
 Moore SD, 76:101-24
 Morris DM, 77:583-613
 Mühlenhoff U, 77:669-700
 Muoio DM, 75:367-401
 Murphy MP, 77:777-98

N

Nasmyth K, 74:595-648
 Nelson WJ, 76:267-94
 Neuberger MS, 76:1-22
 Neupert W, 76:723-49
 Newgard CB, 75:367-401
 Nordlund P, 75:681-706
 Nouwen N, 77:643-67
 Nuñez G, 74:355-83
 Nunnari J, 76:751-80
 Nury H, 75:713-41

O

O'Donnell M, 74:283-315
 Ogle JM, 74:129-77
 Olson EN, 75:19-37
 Orengo CA, 74:867-900

P

Paek A, 75:211-41
 Palczewski K, 75:743-67
 Parker R, 73:861-90
 Partridge L, 77:777-98
 Patterson RL, 73:437-65
 Pearl LH, 75:271-94
 Pebay-Peyroula E, 75:713-41
 Pfeiffer SR, 76:629-45
 Plaxco KW, 73:837-59
 Potter SZ, 74:563-93
 Prakash L, 74:317-53
 Prakash S, 74:317-53

Prodromou C, 75:271-94
 Proudfoot AE, 74:385-410
 Puglisi JD, 77:177-203
 Pylypenko O, 73:991-1018

R

Raetz CRH, 76:295-329
 Rafelski SM, 73:209-39
 Ramakrishnan V, 74:129-77
 Rebay I, 76:513-38
 Reichard P, 75:681-706
 Reményi A, 75:655-80
 Reynolds CM, 76:295-329
 Rice PA, 75:567-601
 Rich A, 73:1-37
 Richards NGJ, 75:629-54
 Riordan JR, 77:701-26
 Robinson CV, 76:167-93
 Rock CO, 74:791-831
 Rose GD, 77:339-62
 Rosenzweig AC, 76:223-41
 Ross J, 77:479-94
 Ryan MT, 76:701-22

S

Sachs JN, 75:707-12
 Sakamoto K, 75:137-63
 Sali A, 77:443-77
 Sancar A, 73:39-85
 San Filippo J, 77:229-57
 Sauer RT, 76:101-24
 Sauve AA, 75:435-65
 Schatz G, 76:673-78
 Schimmel P, 73:147-76
 Schlichting I, 73:991-1018
 Schnarr NA, 76:195-221
 Schramm VL, 75:435-65
 Schröder M, 74:739-89
 Selinger Z, 77:1-13
 Seringhaus M, 73:1051-87
 Serrano L, 77:415-41
 Shahbazian MD, 76:75-100
 Sharon M, 76:167-93
 Sheng M, 76:823-47
 Shilatifard A, 75:243-69
 Siddiqui KS, 75:403-33
 Siderovski DP, 73:925-51
 Simon SM, 76:419-46
 Singleton MR, 76:23-50

Sinskey AJ, 74:433-80
 Smith AD, 74:247-81
 Smith JL, 75:769-90
 Smith SB, 77:205-28
 Smogorzewska A, 73:177-208
 Smotrys JE, 73:559-87
 Snyder SH, 73:437-65
 Spiegelman BM, 77:289-312
 Stokin GB, 75:607-27
 Storz G, 74:199-217
 Stoughton RB, 74:53-82
 Stubbe J, 74:433-80
 Sung P, 77:229-57
 Sweeney M, 74:385-410

T

Tang Y, 76:195-221
 Theriot JA, 73:209-39
 Thornton JM, 74:867-900
 Tian J, 74:433-80
 Tinoco I Jr, 77:77-100
 Tomkinson AE, 77:313-38
 Tontoz P, 77:289-312
 Topf M, 77:443-77
 Toyoshima C, 73:269-92
 Trent MS, 76:295-329
 Trézéguet V, 75:713-41
 Tugarinov V, 73:107-46

U

Ünsal-Kaçmaz K, 73:39-85

V

Valentine JS, 74:563-93
 Venkatachalam K, 76:387-417
 Verma IM, 74:711-38
 Viereggs J, 77:77-100
 von Heijne G, 76:125-40

W

Waldhoer M, 73:953-90
 Wallace DC, 76:781-821
 Wanders RJA, 75:295-332
 Wang XD, 73:87-106
 Wassarman KM, 74:199-217
 Wassarman PM, 74:83-114

Waterham HR, 75:295-332
Weissman JS, 73:617-56
Weitzman MD, 74:711-38
Wennmalm S, 76:419-46
West SC, 77:259-87
Westermann S, 76:563-91
Whistler JL, 73:953-90
White SW, 74:791-831
Whiteson KL, 75:567-601
Whitfield C, 75:39-68
Wigley DB, 76:23-50
Wilkinson ME, 76:51-74
Willard FS, 73:925-51
Williams PM, 77:101-25

Withers SG, 77:521-55
Wolberger C, 75:435-65
Wrenn SJ, 76:331-49
Wright AT, 77:383-414

X

Xia Y, 73:1051-87

Y

Yamada S, 76:267-94
Yan J, 75:769-90
Yarus M, 74:179-98

Ye X, 73:321-54
Yeh BJ, 75:655-80
Yonath A, 74:649-79
Young JAT, 76:243-65
Yu H, 73:1051-87

Z

Zalk R, 76:367-85
Zamecnik P, 74:1-28
Zhang H, 75:769-90
Zhang Y-M, 74:791-831
Zhao H, 73:1051-87
Zheng J, 74:791-831

Chapter Titles, Volumes 73-77

Prefatory

The Excitement of Discovery	A Rich	73:1-37
From Protein Synthesis to Genetic Insertion	P Zamecnik	74:1-28
Wanderings of a DNA Enzymologist: From DNA Polymerase to Viral Latency	IR Lehman	75:1-17
Discovery of G Protein Signaling	Z Selinger	77:1-13
Moments of Discovery	P Berg	77:14-44

DNA

Deoxyribonucleotides and Their Chemistry

Ribonucleotide Reductases	P Nordlund, P Reichard	75:681-706
---------------------------	---------------------------	------------

Genomics

Applications of DNA Microarrays in Biology	RB Stoughton	74:53-82
--	--------------	----------

Replication

Cellular DNA Replicases: Components and Dynamics at the Replication Fork	A Johnson, M O'Donnell	74:283-315
Eukaryotic Translesion Synthesis DNA Polymerases: Specificity of Structure and Function	S Prakash, RE Johnson, L Prakash	74:317-53
Mechanisms for Chromosome and Plasmid Segregation	SK Ghosh, S Hajra, A Paek, M Jayaram	75:211-41

*Mutagenesis*Molecular Mechanisms of Antibody Somatic
HypermutationJM Di Noia,
MS Neuberger 76:1-22*Repair and Modifications*Molecular Mechanisms of Mammalian DNA
Repair and the DNA Damage CheckpointsA Sancar,
LA Lindsey-Boltz,
K Ünsal-Kaçmaz,
S Linn 73:39-85Eukaryotic Cytosine Methyltransferases
DNA Mismatch RepairMG Goll, TH Bestor 74:481-514
TA Kunkel, DA Erie 74:681-710*Chromatin and Chromosomes*Regulation of Telomerase by Telomeric
ProteinsA Smogorzewska,
T de Lange 73:177-208

The Sir2 Family of Protein Deacetylases

G Blander,
L Guarente 73:417-35Chromatin Modifications by Methylation
and Ubiquitination: Implications in the
Regulation of Gene Expression

A Shilatifard 75:243-69

*Recombination and Transposition*Break-Induced Replication and
Recombinational Telomere Elongation
in YeastMJ McEachern,
JE Haber 75:111-35

Mechanisms of Site-Specific Recombination

NDF Grindley,
KL Whiteson,
PA Rice 75:567-601Mechanism of Eukaryotic Homologous
RecombinationJ San Filippo, P Sung,
H Klein 77:229-57*Enzymes and Binding Proteins*DNA Polymerase, The Mitochondrial
Replicase

LS Kaguni 73:293-320

Flap Endonuclease 1: A Central Component
of DNA MetabolismY Liu, H-I Kao,
RA Bambara 73:589-615The Structure and Function of SMC
and Kleisin ComplexesK Nasmyth,
CH Haering 74:595-648The Structure and Function of Telomerase
Reverse Transcriptase

C Autexier, NF Lue 75:493-513

Structure and Mechanism of Helicases
and Nucleic Acid TranslocasesMR Singleton,
MS Dillingham,
DB Wigley 76:23-50

Structural and Functional Relationships
of the XPF/MUS81 Family of Proteins

A Ciccia,
N McDonald,
SC West 77:259-87

RNA

Chemistry and Structure

Structural Insights Into the
Signal Recognition Particle
How RNA Unfolds and Refolds

JA Doudna, RT Batey 73:539-57
PTX Li, J Viereggs, 77:77-100
I Tinoco, Jr.

Transcription and Gene Regulation

Proline Hydroxylation and Gene Expression
An Abundance of RNA Regulators

WG Kaelin Jr. 74:115-28
G Storz, S Altuvia, 74:199-217
KM Wassarman

Single-Molecule Studies of RNA Polymerase:
Motoring Along

KM Herbert, 77:149-76
WJ Greenleaf,
SM Block

Fat and Beyond: The Diverse Biology
of PPAR γ

P Tontonoz, 77:289-312
BM Spiegelman

Splicing, Posttranscriptional Processing and Modifications

Eukaryotic mRNA Decapping
The Nonsense-Mediated Decay RNA
Surveillance Pathway

J Collier, R Parker 73:861-90
Y-F Chang, JS Imam, 76:51-74
MF Wilkinson

Translation

The Molecular Mechanics of
Eukaryotic Translation
Structural Insights into Translational Fidelity

LD Kapp, JR Lorsch 73:657-704
JM Ogle, 74:129-77
V Ramakrishnan

Antibiotics Targeting Ribosomes:
Resistance, Selectivity, Synergism,
and Cellular Regulation

A Yonath 74:649-79

Ribozymes and Prebiotic Evolution

Directed Evolution of Nucleic Acid Enzymes
Origins of the Genetic Code: The Escaped
Triplet Theory

GF Joyce 73:791-836
M Yarus, JG Caporaso, 74:179-98
R Knight

Proteins

Protein Chemistry and Structure

Cold-Adapted Enzymes

KS Siddiqui, 75:403-33
R Cavicchioli

Eukaryotic DNA Ligases: Structural and Functional Insights	T Ellenberger, AE Tomkinson	77:313-38
Structure and Energetics of the Hydrogen-Bonded Backbone in Protein Folding	DW Bolen, GD Rose	77:339-62
<i>Methodology</i>		
Nuclear Magnetic Resonance Spectroscopy of High-Molecular-Weight Proteins	V Tugarinov, PM Hwang, LE Kay	73:107-46
Incorporation of Nonnatural Amino Acids Into Proteins	TL Hendrickson, V de Crécy-Lagard, P Schimmel	73:147-76
Structural Studies by Electron Tomography: From Cells to Molecules	V Lučić, F Förster, W Baumeister	74:833-65
<i>Folding and Design</i>		
Emerging Principles of Conformation-Based Prion Inheritance	P Chien, JS Weissman, AH DePace	73:617-56
Using Protein Folding Rates to Test Protein Folding Theories	B Gillespie, KW Plaxco	73:837-59
The Mammalian Unfolded Protein Response	M Schröder, RJ Kaufman	74:739-89
Structure and Mechanism of the Hsp90 Molecular Chaperone Machinery	LH Pearl, C Prodromou	75:271-94
Protein Misfolding, Functional Amyloid, and Human Disease	F Chiti, CM Dobson	75:333-66
Macromolecular Modeling with Rosetta	R Das, D Baker	77:363-82
<i>Posttranslational Processing and Modifications</i>		
Protein Modification by SUMO	ES Johnson	73:355-82
Palmitoylation of Intracellular Signaling Proteins: Regulation and Function	JE Smotrys, ME Linder	73:559-87
Roles of N-Linked Glycans in the Endoplasmic Reticulum	A Helenius, M Aeibi	73:1019-49
Analyzing Cellular Biochemistry in Terms of Molecular Networks	Y Xia, H Yu, R Jansen, M Seringhaus, S Baxter, D Greenbaum, H Zhao, M Gerstein	73:1051-87

Functions of Site-Specific Histone Acetylation and Deacetylation	MD Shahbazian, M Grunstein	76:75-100
<i>Proteolysis and Turnover</i>		
The tmRNA System for Translational Surveillance and Ribosome Rescue	SD Moore, RT Sauer	76:101-24
<i>Membrane Protein Structure and Function</i>		
Structure and Function of TolC: The Bacterial Exit Duct for Proteins and Drugs	V Koronakis, J Eswaran, C Hughes	73:467-89
Introduction to the Membrane Protein Reviews: The Interplay of Structure, Dynamics, and Environment in Membrane Protein Function	JN Sachs, DM Engelman	75:707-12
Relations Between Structure and Function of the Mitochondrial ADP/ATP Carrier	H Nury, C Dahout-Gonzalez, V Trézéguet, GMJ Lauquin, G Brandolin, E Pebay-Peyroula	75:713-41
G Protein-Coupled Receptor Rhodopsin Transmembrane Traffic in the Cytochrome b ₆ f Complex	K Palczewski	75:743-67
Membrane Protein Structure: Prediction versus Reality	WA Cramer, H Zhang, J Yan, G Kurisu, JL Smith	75:769-90
Structure and Function of Toll Receptors and Their Ligands	A Elofsson, G von Heijne	76:125-40
<i>Families and Evolution</i>		
Zona Pellucida Domain Proteins	NJ Gay, M Gangloff	76:141-65
L Jovine, CC Darie, ES Litscher, PM Wassarman		74:83-114
Protein Families and Their Evolution— A Structural Perspective	CA Orengo, JM Thornton	74:867-900
<i>Proteomics</i>		
The Role of Mass Spectrometry in Structure Elucidation of Dynamic Protein Complexes	M Sharon, CV Robinson	76:167-93

Activity-Based Protein Profiling: From Enzyme Chemistry to Proteomic Chemistry	BF Cravatt, AT Wright, JW Kozarich	77:383-414
Analyzing Protein Interaction Networks Using Structural Information	C Kiel, P Beltrao, L Serrano	77:415-41
Integrating Diverse Data for Structure Determination of Macromolecular Assemblies	F Alber, F Förster, D Korkin, M Topf, A Sali	77:443-77
Enzymology		
<i>Kinetics</i>		
Nontemplate-Dependent Polymerization Processes: Polyhydroxyalkanoate Synthases as a Paradigm	J Stubbe, J Tian, A He, AJ Sinskey, AG Lawrence, P Liu	74:433-80
Relating Protein Motion to Catalysis	S Hammes-Schiffer, SJ Benkovic	75:519-41
From the Determination of Complex Reaction Mechanisms to Systems Biology	J Ross	77:479-94
<i>Catalytic Mechanisms</i>		
Pyridoxal Phosphate Enzymes: Mechanistic, Structural, and Evolutionary Considerations	AC Eliot, JF Kirsch	73:383-415
The Structural Biology of Type II Fatty Acid Biosynthesis	SW White, J Zheng, Y-M Zhang, CO Rock	74:791-831
Structure and Mechanism of the 6-Deoxyerythronolide B Synthase	C Khosla, Y Tang, AY Chen, NA Schnarr, DE Cane	76:195-221
The Biochemistry of Methane Oxidation	AS Hakemian, AC Rosenzweig	76:223-41
Biochemistry and Physiology of Mammalian Secreted Phospholipases A ₂	G Lambeau, MH Gelb	77:495-520
Glycosyltransferases: Structures, Functions, and Mechanisms	LL Lairson, B Henrissat, GJ Davies, SG Withers	77:521-55

Cofactors and Prosthetic Groups

**Structural Aspects of Ligand Binding to and
Electron Transfer in Bacterial
and Fungal P450s**

O Pylypenko,
I Schlichting 73:991-1018

**Structure, Function, and Formation
of Biological Iron-Sulfur Clusters**

DC Johnson,
DR Dean,
AD Smith,
MK Johnson 74:247-81

Regulation and Metabolic Control

The Biochemistry of Sirtuins

AA Sauve,
C Wolberger,
VL Schramm,
JD Boeke 75:435-65

Inhibitors and Toxins

**Anthrax Toxin: Receptor Binding,
Internalization, Pore Formation,
and Translocation**

JAT Young, RJ Collier 76:243-65

Carbohydrates

Polysaccharide Chemistry and Structure

**Biosynthesis and Assembly of Capsular
Polysaccharides in *Escherichia coli***

C Whitfield 75:39-68

Glycoproteins and Protein Glycosylation

Role of Glycosylation in Development

RS Haltiwanger,
JB Lowe 73:491-537

Cell Walls, Extracellular Matrix and Adhesion Molecules

**Synapses: Sites of Cell Recognition, Adhesion,
and Functional Specification**

S Yamada, WJ Nelson 76:267-94

Lipids

Fatty Acids and Their Chemistry

**Structure and Function of Fatty Acid
Amide Hydrolase**

MK McKinney,
BF Cravatt 74:411-32

Lipid Chemistry and Structure

**Lipid A Modification Systems
in Gram-negative Bacteria**

CRH Raetz,
CM Reynolds,
MS Trent,
RE Bishop 76:295-329

Sphingolipids and Glycolipids

**Lysophospholipid Receptors:
Signaling and Biology**

I Ishii, N Fukushima,
X Ye, J Chun 73:321-54

Other Biomolecules

Drug Discovery and Combinatorial Chemistry

**Chemical Evolution as a Tool for
Molecular Discovery**

SJ Wrenn, 76:331-49
PB Harbury

Biomaterials

**Molecular Mechanisms of
Magnetosome Formation**

A Komeili 76:351-66

Bioenergetics

Electron Transport and Oxidative Phosphorylation

**Energy Converting NADH:Quinone
Oxidoreductase (Complex I)**

U Brandt 75:69-92

**Energy Transduction: Proton Transfer
Through the Respiratory Complexes**

JP Hosler, 75:165-87
S Ferguson-Miller,
DA Mills

Permeases and Transporters

**ATP-Binding Cassette Transporters
in Bacteria**

AL Davidson, J Chen 73:241-68

Ion Pumps and Channels

**Structural Basis of Ion Pumping
by Ca^{2+} -ATPase of the
Sarcoplasmic Reticulum**

C Toyoshima, G Inesi 73:269-92

**Inositol 1,4,5-Trisphosphate Receptors
as Signal Integrators**

RL Patterson, 73:437-65
D Boehning,
SH Snyder

**Modulation of the Ryanodine Receptor
and Intracellular Calcium**

R Zalk, SE Lehnart, 76:367-85
AR Marks

TRP Channels

K Venkatachalam, 76:387-417
C Montell

Single-Molecule Biomechanics and Biological Nano-Devices

Mechanical Processes in Biochemistry

C Bustamante, 73:705-48
YR Chemla,
NR Forde,
D Izhaky

Studying Individual Events in Biology	S Wennmalm, SM Simon	76:419-46
<i>In singulo</i> Biochemistry: When Less Is More	C Bustamante	77:45-50
Advances in Single-Molecule Fluorescence Methods for Molecular Biology	C Joo, H Balci, Y Ishitsuka, C Buranachai, T Ha	77:51-76
Single-Molecule Studies of Protein Folding	A Borgia, PM Williams, J Clarke	77:101-25
Structure and Mechanics of Membrane Proteins	A Engel, HE Gaub	77:127-48
Translation at the Single-Molecule Level	RA Marshall, CE Aitken, M Dorywalska, JD Puglisi	77:177-203
Recent Advances in Optical Tweezers	JR Moffitt, YR Chemla, SB Smith, C Bustamante	77:205-28
Signal Transduction		
<i>Hormones, Neurotransmitters, and Growth Factors</i>		
Regulation of Protein Function by Glycosaminoglycans—As Exemplified by Chemokines	TM Handel, Z Johnson, SE Crown, EK Lau, M Sweeney, AE Proudfoot	74:385-410
<i>Lipid-Derived Signaling Molecules</i>		
Novel Lipid Modifications of Secreted Protein Signals	RK Mann, PA Beachy	73:891-923
<i>Receptors and Adaptors</i>		
Opioid Receptors	M Waldhoer, SE Bartlett, JL Whistler	73:953-90
Membrane-Associated Guanylate Kinases Regulate Adhesion and Plasticity at Cell Junctions	L Funke, S Dakoji, DS Bredt	74:219-45
Domains, Motifs, and Scaffolds: The Role of Modular Interactions in the Evolution and Wiring of Cell Signaling Circuits	RP Bhattacharyya, A Reményi, BJ Yeh, WA Lim	75:655-80

Signaling Pathways Downstream of Pattern-Recognition Receptors and Their Cross Talk	MS Lee, Y-J Kim	76:447-80
<i>Small GTPases and Heterotrimeric G Proteins</i>		
Return of the GDI: The GoLoco Motif in Cell Division	FS Willard, RJ Kimple, DP Siderovski	73:925-51
<i>Second Messengers</i>		
Biochemistry and Physiology of Cyclic Nucleotide Phosphodiesterases: Essential Components in Cyclic Nucleotide Signaling	M Conti, J Beavo	76:481-511
<i>Kinases, Phosphatases, and Phosphorylation Cascades</i>		
LKB1-Dependent Signaling Pathways	DR Alessi, K Sakamoto, JR Bayascas	75:137-63
The Death-Associated Protein Kinases: Structure, Function, and Beyond	S Bialik, A Kimchi	75:189-210
The Eyes Absent Family of Phosphotyrosine Phosphatases: Properties and Roles in Developmental Regulation of Transcription	J Jemc, I Rebay	76:513-38
<i>Oncogenes and Tumor Suppressor Genes</i>		
Structural Biology of the Tumor Suppressor p53	AC Joerger, AR Fersht	77:557-82
<i>Molecular Basis of Chemotherapy</i>		
Tyrphostins and Other Tyrosine Kinase Inhibitors	A Levitzki, E Mishani	75:93-109
Asparagine Synthetase Chemotherapy	NGJ Richards, MS Kilberg	75:629-54
Cellular Biochemistry		
<i>Cell Cycle and Cell Division</i>		
Assembly Dynamics of the Bacterial MinCDE System and Spatial Regulation of the Z Ring	J Lutkenhaus	76:539-62
Structures and Functions of Yeast Kinetochore Complexes	S Westermann, DG Drubin, G Barnes	76:563-91

Cytoskeleton, Cell Motility, and Chemotaxis

Crawling Toward a Unified Model of Cell
Motility: Spatial and Temporal Regulation
of Actin Dynamics

SM Rafelski, 73:209-39
JA Theriot

Intermediate Filaments: Molecular Structure,
Assembly Mechanism, and Integration
Into Functionally Distinct Intracellular
Scaffolds

H Herrmann, U Aebi 73:749-89

Dynamic Filaments of the
Bacterial Cytoskeleton

KA Michie, J Löwe 75:467-92

Animal Cytokinesis: From Parts List
to Mechanisms

US Eggert, 75:543-66
TJ Mitchison,
CM Field

Mechanism and Function of Formins in the
Control of Actin Assembly

BL Goode, MJ Eck 76:593-627

Biomembranes: Composition, Biology, Structure, and Function

Toward a Biomechanical Understanding
of Whole Bacterial Cells

DM Morris, GJ Jensen 77:583-613

Vesicular Trafficking and Secretion

Unsolved Mysteries in Membrane Traffic
How Does Synaptotagmin Trigger
Neurotransmitter Release?

SR Pfeffer 76:629-45

Protein Translocation Across the Bacterial
Cytoplasmic Membrane

ER Chapman 77:615-41

AJM Driessen, 77:643-67
N Nouwen

Intracellular Targeting and Localization

Structural Biology of Nucleocytoplasmic
Transport

A Cook, F Bono, 76:647-71
M Jinek, E Conti

Organelles and Organelle Biogenesis

Biochemistry of Mammalian
Peroxisomes Revisited

RJA Wanders, 75:295-332
HR Waterham

The Magic Garden

G Schatz 76:673-78

DNA Replication and Transcription in
Mammalian Mitochondria

M Falkenberg, 76:679-99
N-G Larsson,
CM Gustafsson

Mitochondrial-Nuclear Communications

MT Ryan, 76:701-22
NJ Hoogenraad

Translocation of Proteins into Mitochondria

W Neupert, 76:723-49
JM Herrmann

The Machines that Divide and Fuse Mitochondria	S Hoppins, L Lackner, J Nunnari	76:751-80
Why Do We Still Have a Maternally Inherited Mitochondrial DNA? Insights from Evolutionary Medicine	DC Wallace	76:781-821
Maturation of Iron-Sulfur Proteins in Eukaryotes: Mechanisms, Connected Processes, and Diseases	R Lill, U Mühlenhoff	77:669-700
<i>Apoptosis</i>		
Cytochrome C-Mediated Apoptosis	X Jiang, X Wang	73:87-106
Organismal Biochemistry		
<i>Inborn Errors, Transgenic Animals, and Gene Therapy</i>		
Gene Therapy: Twenty-First Century Medicine	IM Verma, MD Weitzman	74:711-38
<i>Biochemical Basis of Disease</i>		
The Biochemistry of Parkinson's Disease	MR Cookson	74:29-52
Copper-Zinc Superoxide Dismutase and Amyotrophic Lateral Sclerosis	JS Valentine, PA Doucette, SZ Potter	74:563-93
Obesity-Related Derangements in Metabolic Regulation	DM Muoio, CB Newgard	75:367-401
Axonal Transport and Alzheimer's Disease	GB Stokin, LSB Goldstein	75:607-27
CFTR Function and Prospects for Therapy	JR Riordan	77:701-26
<i>Molecular Physiology and Nutritional Biochemistry</i>		
Monitoring Energy Balance: Metabolites of Fatty Acid Synthesis as Hypothalamic Sensors	P Dowell, Z Hu, MD Lane	74:515-34
Structure and Physiologic Function of the Low-Density Lipoprotein Receptor Signaling Pathways in Skeletal Muscle Remodeling	H Jeon, SC Blacklow, R Bassel-Duby, EN Olson	74:535-62 75:19-37
Aging and Survival: The Genetics of Life Span Extension by Dietary Restriction	W Mair, A Dillin	77:727-54
Cellular Defenses against Superoxide and Hydrogen Peroxide	JA Imlay	77:755-76
Toward a Control Theory Analysis of Aging	MP Murphy, L Partridge	77:777-98

Immunochimistry

NOD-LRR Proteins: Role in Host-Microbial
Interactions and Inflammatory Disease

N Inohara,
M Chamaillard,
C McDonald,
G Nuñez

74:355-83

Neurochemistry

The Postsynaptic Architecture of Excitatory
Synapses: A More Quantitative View

M Sheng,
CC Hoogenraad

76:823-47